

Docket No.: A-2577

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By: 

Date: April 28, 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applicant : Jens Hieronymus et al.

Applic. No.: 09/694,569

Filed : October 23, 2000

Title : Rubber Blanket with Register Cut-Outs, and
Method of Aligning a Rubber Blanket

Examiner : Ren Luo Yan - Art Unit: 2854

BRIEF ON APPEAL

Hon. Commissioner of Patents and Trademarks,
Washington, D. C. 20231,

S i r :

This is an appeal from the final rejection in the Office action dated December 19, 2002, finally rejecting claims 1-11.

Appellants submit this *Brief on Appeal* in triplicate, including payment in the amount of \$320.00 to cover the fee for filing the *Brief on Appeal*.

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Real Party in Interest:

This application is assigned to Heidelberger Druckmaschinen AG of Heidelberg, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-11 are rejected and are under appeal. No claims were cancelled.

Status of Amendments:

No claims have been amended after the final Office action. No response was filed for the final Office action. No Advisory Action has been received.

Summary of the Invention:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to a rubber blanket with register cut-outs, and a method of aligning a rubber blanket, more particularly, formed with register cut-outs, relative to a clamping device

having register pins, for clamping the rubber blanket onto a cylinder.

Appellants explained on page 13 of the specification, line 1, that, referring now to the drawings and, first, particularly to Fig. 1 thereof, there is shown therein one of a number of offset printing units which may be included in a rotary printing machine. In Fig. 1, there is shown a varnishing unit arranged downline of the offset printing unit in the transport direction of the printing material, the varnishing unit including an impression cylinder 2 for transporting a sheet of printing material 3, and a cylinder 4 with a rubber blanket 5, which is fastened to the cylinder 4 by clamping devices 6 and 7.

Appellants further explained on page 13 of the specification, line 12, that the rubber blanket 5 includes an upper-side rubber layer 8 (note Fig. 3) which carries the varnish and from which at least one recess 9 for the cut-out in-line varnishing of the printing material 3 has been cut, and an underside fabric layer 10 and clamping bars 11 and 12, which are bonded to the fabric layer 10. Intermediate layers may also be disposed between the layers 8 and 10. The sheet-like composite material formed of at least the layers 8 and 10 are referred to hereinbelow as the blanket material 13.

Appellants outlined in the last paragraph on page 13 of the specification, starting at line 22, that the corner angles formed by the upper sides of the clamping bars 11 and 12 together with the narrow sides of the blanket material 13, and those formed by the narrow sides of the clamping bars 11 and 12 together with the underside of the blanket material 13, are provided, over the entire width of the rubber blanket 4 with applied seals 14 for which an adhesive different from that used for bonding the clamping bars 11 and 12 to the blanket material 13 has been used.

Appellants outlined on page 14 of the specification, line 5, that the overall width of each clamping bar 11, 12 disposed on one side of the blanket material 13 is 2 to 3 cm and, as shown in Fig. 2, is subdivided into an overlap width 15 corresponding approximately to half the total width, by which each clamping bar 11, 12 projects beyond a corresponding edge 16 of the blanket material 13, and a remaining covering width over which each clamping bar 11, 12 is (nondestructively) inseparably connected to the blanket material 13.

It is stated in the last paragraph on page 14 of the specification, line 14, that each of the clamping devices 6 and 7 belonging to a tensioning device for tensioning the

rubber blanket 5 includes a respective clamping pad 17, 18 and a respective clamping jaw 19, 20 which is adjustable relative to the respective clamping pad 17, 18 in order to clamp only the respective clamping bar 11, 12 firmly between the respective clamping pad 17, 18 and the respective clamping jaw 19, 20, while the blanket material 13 is located completely outside the clamping devices 6 and 7. In other words, when the clamping bars 11 and 12 are firmly clamped, the blanket material 13 is located neither between the clamping pad 17 and the clamping jaw 19 nor between the clamping pad 18 and the clamping jaw 20.

Appellants described on page 15 of the specification, line 1, that only the clamping device 6 assigned to the start of the print includes two cylindrical register pins 21 and 22, which engage, through register cut-outs 23 and 24, with the clamping bar 11 clamped in and projecting beyond a supporting surface for the clamping bar 11 on the clamping pad 17. The register pin 21 rests on the approximately semicircular register cut-out 23, along the inner edge of the latter, and the register pin 22, which is formed like the register pin 21, contacts the inner wall of the rectangular register cut-out 24 only at a tangential point, as can be seen in Fig. 2. In order to achieve such a contact, the width of the cut-out 24 is somewhat greater than the diameter of the cut-out 23,

and the diameter of the pin 22 can also be somewhat smaller than the diameter of the pin 21.

Appellants further described on page 15 of the specification, line 16, that the rubber blanket 5 is clamped onto the cylinder 4 in the following manner:

It is outlined in the last paragraph on page 15 of the specification, line 19, that, initially, the rubber blanket 5 is inserted into the machine 1, the clamping bar 11 being placed with one flat side thereof onto the clamping pad 17 disposed on the cylinder 4, and being displaced on the pad 17 until the register pins 21 and 22 make contact in the register cut-outs 23 and 24. The clamping jaw 19 is then pressed onto the other flat side of the clamping bar 11 by an otherwise non-illustrated eccentric shaft so that the clamping bar 11 is firmly held, and the in-register position of the leading end of the rubber blanket 5 is fixed.

Appellants explained on page 16 of the specification, line 4, that a pressure roller 25 is then set against or into engagement with the blanket material 11, and the cylinder 4 is set into rotation, so that the pressure roller 25 rolls on the blanket material 13 from the start of the print in a direction towards the tail end of the print and, as a result,

tautens the blanket material 13 and places it smoothly from the start to the tail end thereof onto the cylinder 4.

It is further stated on page 16 of the specification, line 12, that, after the pressure roller 25 has reached the tail end of the print, the clamping bar 12 is placed on the clamping pad 18 disposed on the cylinder 4 in the alignment resulting from the rubber blanket 5 being pulled onto the cylinder 4, and this alignment is fixed by closing the clamping device 7. The clamping device 7, which otherwise corresponds in the construction thereof to the clamping device 6, does not have any register pins, and the clamping bar 12 is formed without register cut-outs, which are required only for the leading end and not for the tail end of the rubber blanket 5. The clamping devices 6 and 7 are then adjusted towards one another, thereby tautening the rubber blanket 5. In this regard, the force flow of the tensioning or tautening force flows from the clamping device 7, over the clamping bar 12, further over a flat bond 26, further over the blanket material 13, further over a further bond 27 and ultimately over the clamping bar 11 to the clamping device 6. It has been shown that adhesive bonds 26 and 27 produced with a suitable adhesive, for example No. 588 from 3 M, i.e., the Minnesota Mining and Manufacturing Co., exhibit a sufficiently high shear strength of ≥ 4 Newtons per square

millimeter and withstand loadings of this type over a long service life, even without the bonded parts 11, 13 and 12, 13, respectively, being pressed together, which is conceivable as distinguished from the exemplary embodiment shown under the loading by the clamping devices 6 and 7.

Appellants explained on page 18 of the specification, line 12, that a printing plate 28 forming a register system together with the rubber blanket and the cylinder 4 can be clamped onto the cylinder 4 as required, alternating with the rubber blanket 5. Positioning the printing plate 28 by the register pins 21 and 22, pulling on the printing plate 28 by the pressure roller 25, and firmly clamping the ends of the printing plate in the clamping devices 6 and 7 are performed in the manner already explained hereinbefore with regard to clamping the rubber blanket 5.

It is stated in the last paragraph on page 17, line 22, that, for this purpose, the leading end of the printing plate 28 is provided with register cut-outs 30 and 31 (register cut-out 30 hides the register cut-out 31 located behind it in Fig. 1) which, in terms of the shape thereof, correspond to the register cut-outs 23 and 24, the center spacing of the

cut-outs 30 and 31, in exactly the same way as that of the register cut-outs 23 and 24, corresponding to a center spacing 29 of the register pins 21 and 22.

Appellants outlined on page 18 of the specification, line 5, that, in order for the ends of the printing plate 28 to be insertable into clamping devices 6 and 7 which open only slightly, the ends of the printing plate 28 are tapered over a width corresponding approximately to the overlap width 15 to a thickness corresponding approximately to the thickness of the clamping bars 11 and 12. The printing plate 28 is a flexographic printing plate having a printing relief layer 32 bearing the printed image and being tapered in the region of the ends of the plate during the development process of the printing image. If the relief layer 32 is a photo polymer layer, the development of the printing image and the tapering of the ends of the plate can be performed by a washing process. If the printing plate 28 is additionally a multilayer plate, the relief layer 32 is removable completely down to a stable carrier layer 33. The register cut-outs 30 and 31, before the use thereof for the in-register positioning of the printing plate 28 in the clamping device 6, have already been used for the in-register positioning of the printing plate 21 during the imaging or image-setting process preceding the washing process and producing the

printed image, which was latent only before the washing process.

References Cited:

U.S. Patent No. 3,384,014 (Berg), dated May 21, 1968;
U.S. Patent No. 4,707,902 (Kunkel et al.), dated November 24, 1987;
German Utility Model No. G 94 16 007.4, dated February 9, 1995.

Issues

1. Whether or not claim 1 is anticipated by Kunkel et al. (U.S. Patent No. 4,707,902) under 35 U.S.C. §102(b).
2. Whether or not claims 2, 4-6, and 8-11 are obvious over Kunkel et al. (U.S. Patent No. 4,707,902) in view of Berg (U.S. Patent No. 3,384,014) under 35 U.S.C. §103.
3. Whether or not claim 3 is obvious over Kunkel et al. (U.S. Patent No. 4,707,902) in view of Berg (U.S. Patent No. 3,384,014) and in further view of Fox et al. (U.S. Patent No. 5,562,039) under 35 U.S.C. §103.
4. Whether or not claim 7 is obvious over Kunkel et al. (U.S. Patent No. 4,707,902) in view of Berg (U.S. Patent No.

3,384,014) and in further view of DE G 94 16 007.4 under 35 U.S.C. §103. .

Grouping of Claims:

Claims 1, 2, and 8-11 are independent. Claims 3-7 depend on claim 2. The patentability of claims 3-7 is not separately argued. Therefore, claims 3-7 stand or fall with claim 2.

Arguments:

Arguments regarding the patentability of claim 1:

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

bringing the substantially u-shaped register cut-outs formed in the rubber blanket configuration into contact with the register pins of the clamping device when the clamping device has been applied to the cylinder.

The Kunkel et al. reference discloses that the blanket ends (7,8) are inserted between the clamping strips of the clamping device (5, 6) outside the press until the recesses (14, 15) come into contact with the register pin (12, 13). Then the clamping devices (5, 6) are secured by clamping bolts (29). The clamping devices (5,6) are then inserted with the blanket (26) in the blanket or plate cylinder (2) (column 3, lines 27-35).

The reference does not show or suggest bringing the substantially u-shaped register cut-outs formed in the rubber blanket configuration into contact with the register pins of the clamping device when the clamping device has been applied to the cylinder, as recited in claim 1 of the instant application. The Kunkel et al. reference discloses first securing the blanket ends in the clamping devices **outside** of the press and then **inserting the clamping devices** in the blanket or plate cylinder. This is contrary to the invention of the instant application, in which the clamping device is located on the blanket cylinder before the blanket configuration is secured to the clamping device.

Arguments regarding the patentability of claims 2, 8, 10, and 11:

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 2, 8, 10, and 11 call for, *inter alia*:

the rubber blanket configuration having a clamping bar with substantially u-shaped register cut-outs formed therein.

In lines 1-3 on page 3 of the final Office action, the Examiner stated that it would have been obvious to those having ordinary skill in the art to provide the blanket of Kunkel et al. with clamping bars having u-shaped notches appropriately disposed to be engaged with the clamping device on the cylinder so as to facilitate the replacement of the blanket by sliding the blanket relative to the clamping bars.

It is the appellants' position that the Examiner's assertion is not correct for several reasons.

First, the Kunkel et al. reference discloses including recesses (14 and 15) directly in the rubber blanket (26) (column 2, lines 54-56). A person of ordinary skill in the art realizes that the teaching of Kunkel et al. is cost effective because it makes it possible to eliminate the need

for clamping bars. Therefore, Kunkel et al. teach a person of ordinary skill in the art away from the object according to claims 2, 8, 10, and 11 of the instant application.

Therefore, the person of ordinary skill in the art does not have any motivation for the use of clamping bars.

Furthermore, the Berg reference teaches that the notches in clamping bars are supposed to have a completely closed and thus not a U-shaped inner contour. In the invention of the instant application, typical register cut-outs are used. It is common knowledge that typical register cut-outs lead into a leading edge, i.e. in the state of the art they lead into the leading edge of the blanket material (prior art reference Kunkel et al. U.S Patent No. 4,707,902; Fig. 6 positions 14 and 15) and in the invention of the instant application they lead into the leading edge of the clamping bar 11 (Fig 2, positions 23 and 24). In other words, the shape of a typical register is not closed, it is substantially U-shaped.

Therefore, the combination of Kunkel et al. and Berg would not lead to a rubber blanket configuration having a clamping bar with substantially U-shaped register cut-outs formed therein.

It is well settled that almost all claimed inventions are but novel combinations of old features. The courts have held in

this context, however, that when "it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation **in the prior art** to make the selection made by the appellant". Interconnect Planning Corp. v. Feil, 227 USPQ 543, 551 (Fed. Cir. 1985) (emphasis added). "Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination". In re Bond, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). "Under Section 103 teachings of references can be combined **only** if there is some suggestion or incentive to do so." ACS Hospital Systems, Inc. v. Montefiore Hospital et al., 221 USPQ 929, 933, 732 F.2d 1572 (Fed. Cir. 1984) (emphasis original). "Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be '**clear and particular.**'" Winner Int'l Royalty Corp. v. Wang, 53 USPQ2d 1580, 1587, 202 F.3d 1340 (Fed. Cir. 2000) (emphasis added; citations omitted); Brown & Williamson Tobacco Corp. v. Philip Morris, Inc., 56 USPQ2d 1456, 1459 (Fed. Cir. Oct. 17, 2000). Appellants believe that there is no "clear and particular" teaching or suggestion in Kunkel et al. to incorporate the features of

Berg, and there is no teaching or suggestion in Kunkel et al. to incorporate the features of Berg.

In establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir. 1988), *cert. den.*, 488 U.S. 825 (1988). The Examiner has not provided the requisite reason why one of ordinary skill in the art would have been led to modify Kunkel et al. or Berg or to combine Kunkel et al.'s and Berg's teachings to arrive at the claimed present invention. Further, the Examiner has not shown the requisite motivation from some teaching, suggestion, or inference in Kunkel et al. or Berg or from knowledge available to those skilled in the art.

Appellants respectfully believe that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the appellant's structure as a template and selecting elements from references to fill the gaps. . . . The references **themselves** must provide some teaching whereby the appellant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references.

Since claim 2 is believed to be allowable, dependent claims 3-7 are believed to be allowable as well.

Arguments regarding the patentability of claim 9:

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 9 calls for, *inter alia*:

a rubber blanket configuration having structures defining further substantially U-shaped register cutouts, disposed in the rubber blanket configuration and corresponding to the substantially U-shaped register cutouts of the printing plate.

In lines 5-11 on page 3 of the final Office action, the Examiner stated that Kunkel et al. teach the use of register pins and U-shaped notches on the blanket cylinder as well as on a plate cylinder. The Examiner continues to state that since it is well known in an offset printing press, both blanket cylinder and plate cylinder are present. The Examiner stated that in view of the teaching of Kunkel et al. it would have been obvious to one of ordinary skill in the art to provide the blanket cylinder and the plate cylinder of the offset printing machine with the same blanket or plate registration system so as to simplify the blanket and plate mounting operation.

It is noted that the object of claim 9, does not pertain to cylinders. It pertains to a register system with different cylinder covers (i.e. a printing plate and a rubber blanket configuration). The registration system of claim 9 pertains to two covers that are clamped on the same cylinder (page 10,

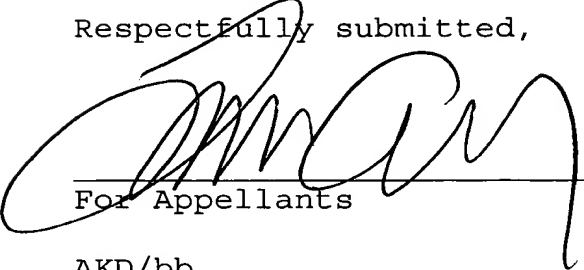
lines 16-25). This is contrary to the Examiner's comments regarding the plate and blanket cylinders.

As stated above with regard to claims 2, 8, 10, and 11, appellants respectfully believe that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the appellant's structure as a template and selecting elements from references to fill the gaps. . . . The references **themselves** must provide some teaching whereby the appellant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references.

Based on the above-given arguments the honorable Board is respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,

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For Appellants

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Appendix - Appealed Claims:

1. A method of aligning a rubber blanket configuration formed with substantially u-shaped register cut-outs, relative to a clamping device having register pins, for clamping the rubber blanket configuration onto a cylinder, which comprises bringing the substantially u-shaped register cut-outs formed in the rubber blanket configuration into contact with the register pins of the clamping device when the clamping device has been applied to the cylinder.

2. A rubber blanket configuration, comprising:

a rubber blanket formed of a blanket material; and

said rubber blanket having a clamping bar with substantially u-shaped register cut-outs formed therein.

3. The rubber blanket configuration according to claim 2, wherein said clamping bar is disposed only on an underside of the blanket material.

4. The rubber blanket configuration according to claim 2, wherein said clamping bar projects beyond an edge of the blanket material.

5. The rubber blanket configuration according to claim 4, wherein said edge is a leading edge of the blanket material.

6. The rubber blanket configuration according to claim 2, wherein the register cut-outs are formed only in said clamping bar.

7. The rubber blanket configuration according to claim 2, including a sealing substance provided in at least one corner angle between the blanket material and said clamping bar.

8. An assembly, comprising:

a rubber blanket configuration formed of a blanket material;

said rubber blanket configuration having a clamping bar with substantially u-shaped register cut-outs formed therein; and

a clamping device fastening said rubber blanket configuration to a cylinder, said clamping device only gripping said clamping bar.

9. A register system, comprising:

a printing plate with substantially u-shaped register cutouts formed therein; and

a rubber blanket configuration having structures defining further substantially u-shaped register cutouts, disposed in the rubber blanket configuration and corresponding to said substantially u-shaped register cutouts of said printing plate.

10. A printing machine, comprising:

a rubber blanket configuration being formed of a blanket material;

said rubber blanket configuration including a clamping bar having substantially u-shaped register cut-outs formed therein.

11. A varnishing machine, comprising:

a rubber blanket configuration being formed of a blanket material;

said rubber blanket configuration including a clamping bar having substantially u-shaped register cut-outs formed therein.